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Attorney Docket No. 21578-007

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Alexander Baguisi and Karl M. Ebert
SERIAL NUMBER: 10/044,006 EXAMINER: To Be Assigned
FILING DATE: January 11, 2002 ART UNIT: To Be Assigned
FOR: PRIMORDIAL GERM CELL-BASED GERM LINE PRODUCTION OF BIRDS

April 5, 2002
Boston, Massachusetts

Commissioner for Patents
Washington, D.C. 20231

TRANSMITTAL LETTER

Transmitted herewith for filing in the present application are the following documents:

- ☒ Information Disclosure Statement (1 pg.);
- ☒ PTO Form 1449 (2 pgs.);
- ☒ Copy of references cited; and
- ☒ Return postcard.

Applicant believes that no fees are due with this submission; however, the Commissioner is hereby authorized to charge any fees that may be due to Deposit Account No. 50-0311, Reference No. 21578-007. A duplicate copy of this Transmittal Letter is enclosed.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

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INFORMATION DISCLOSURE STATEMENT

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, Applicants hereby make of record the documents listed on the attached modified Form PTO-1449 (submitted in duplicate) in the above-identified application, copies of which are submitted herewith. The order of presentation of the references should not be construed as an indication of the importance of the references.

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits in the above-identified case. Accordingly, no fee or certification is required. 37 C.F.R. §1.97. Please charge any additional fees that may be due, or credit any overpayment of same, to Deposit Account No. 50-0311, Reference No. 21578-007.

Respectfully submitted,



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Modified Form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Application Number	10/044,006
Filing Date	January 11, 2002
First Named Inventor	Baguisi et al.
Group Art Unit	Not yet assigned
Examiner Name	Not yet assigned
Attorney Docket Number	21578-007

U.S. PATENT DOCUMENTS

Exam Initials	Cite No.	U.S. Patent Document No.	Issue Date	Name of Patentee(s) or Applicant(s)	Class	Sub Class	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS

Exam Initials	Cite No.	Foreign Patent Document Office Number	Name of Patentee(s) or Applicant(s)	Date of Publication	Translation Yes No
	B1	WO 0025578	Baguisi et al.	05/11/2000	Y

OTHER NON PATENT LITERATURE DOCUMENTS

Exam Initials	Cite No.	Name of Author, Title (when appropriate), Publication, Volume, Page(s), Date, Etc.
	C1	Aige-Gil et al., 1991. Sterilization of avian embryos with busulphan. Res. Vet. Sci.50:139-144.
	C2	Allioli et al., 1997. Use of gonadal primordial germ cells (PGCs) as tools for gene transfer in chickens. Methods Mol. Biol. 62: 425-432.
	C3	Baguisi et al., 1999. Production of goats by somatic cell nuclear transfer. Nature Biotechnology 17: 456-461.
	C4	Baguisi et al., 2000. Induced enucleation in nuclear transfer procedures to produce cloned animals. Theriogenology 51: 209.
	C5	Bosselman et al., 1989. Germline transmission of exogenous genes in the chicken. Science 243: 533-535.
	C6	Brazolot et al., 1991. Efficient transfection of chicken cells by lipofection, and introduction of transfected blastodermal cells into the embryo. Mol. Reprod. Dev. 30: 304-312.
	C7	Brinster, R.L. and J.W. Zimmerman, 1994. Spermatogenesis following male germ-cell transplantation. Proc. Natl. Acad. Sci. 91:11298-11302.
	C8	Brinster et al., 1994. Germline transmission of donor haplotype following spermatogonial transplantation. Proc. Natl. Acad. Sci. 91: 11303-11307.
	C9	Brinster et al., 1989. No simple solution for making transgenic mice. Cell 59: 239-241.
	C10	Carsience et al., 1993. Germline chimeric chickens from dispersed donor blastodermal cells and compromised recipient embryos. Development 117: 669-675.
	C11	Chang et al., 1997. Production of germline chimaeric chickens by transfer of cultured primordial germ cells. Cell Biology International 21: 495-499
	C12	Cibelli et al., 1998. Cloned transgenic calves produced from nonquiescent fetal fibroblasts. Science 280: 1256-1258.
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	C16	Ebert et al., 1989. Gene Transfer through embryo microinjection. p. 233-250. Pergamon Press.
	C17	Ebert et al., 1999. Genetic engineering via transgenics and cloning: Prospects, value and environmental impact. Interdisciplinary Environmental Review 1: 1-22.
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C23	Kubish et al., 1997. Adenovirus-mediated gene transfer by perivitelline microinjection of mouse, rat, and cow embryos. Biol. Reprod. 56: 119-124.
C24	Lavitrano et al., 1989. Sperm cells as vectors for introducing foreign DNA into eggs: Genetic transformation of mice. Cell 57: 717-723.
C25	Love et al., 1994. Transgenic birds by DNA injection. Bio/Technology. 12:60-63.
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C27	Matsui et al., 1992. Derivation of pluripotential embryonic stem cells from murine primordial germ cells in culture. Cell:841-847.
C28	Naito et al., 1998. Expression of exogenous DNA in the gonads of chimaeric chicken embryos produced by transfer of primordial germ cells transfected in vitro and subsequent fate of the introduced DNA. J. Reprod. Fert. 113: 137-143.
C29	Nakanishi, et al., 1993. Gene transfer in the chicken by sperm-mediated methods. Mol. Rprod. Dev. 36: 258-261.
C30	Pain et al., 1996. Long-term in vitro culture and characterization of avian embryonic stem cells with multiple morphogenetic potentialities. Development 122: 2339-2348.
C31	Palmiter et al., 1986. Germ-line transformation of mice. Ann. Rev. Genet. 20: 465-499.
C32	Park et al., 2000. Derivation and characterization of pluripotent embryonic germ cells in chicken. Mol. Reprod. And Dev. 56: 475-482.
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C34	Petitte et al., 1990. Production of somatic and germline chimeras in the chicken by transfer of early blastodermal cells. Development 108: 185-189.
C35	Piedrahita et al., 1997. Advances in the generation of transgenic pigs via embryo-derived and primordial germ cell-derived cells. J Reprod Fertil 52 (suppl):245-254.
C36	Polejaeva et al., 2000. Cloned pigs produced by nuclear transfer from adult somatic cells. Nature 407: 86-90.
C37	Resnick et al., 1992. Long-term proliferation of mouse primordial germ cells in culture. Nature 359:550-551.
C38	Rossant, Janet 1993. Immortal germ cells?. Current Biology, 3, 1: 47-49
C39	Salter et al., 1986. Gene insertion into the chicken germ line by retroviruses. Poultry Science 65: 1445-1458.
C40	Sang, H. 1994. Transgenic chickens—methods and potential applications. Tibtech 12: 415-420.
C41	Shim et al., 1997. Isolation of pluripotent stem cells from cultured porcine primordial germ cells. Biol Reprod 57:1089-1095.
C42	Shuman, R.M. 1991. Production of transgenic birds. Experientia 47: 897-905
C43	Squires et al., 1994. Transgenic chickens by liposome-sperm-mediated gene transfer. Proceedings of the 5th World Congress on Genetics Applied to Livestock Production. 21: 350-353.
C44	Tsukui et al., 1996. Transgenesis by adenovirus-mediated gene transfer into mouse zona-free eggs. Nature Biotechnology 14: 982-985.
C45	Vick et al., 1992. Transgenic birds from transformed primordial germ cells. Dept of Pure and Applied Zoology, School of Animal and Microbial Sciences, University of Reading Reading RG62AJ, U.K., 179-182
C46	Vick et al., 1993. Germ-line chimaeras can produce both strains of fowl with high efficiency after partial sterilization. J. Reprod. Fert. 98: 637-641.
C47	Wakayama et al., 1998 Full-term development of mice from enucleated oocytes injected with cumulus cell nuclei. Nature 394: 369-394
C48	Watanabe et al., 1994. Liposome-mediated DNA transfer into chicken primordial germ cells in vivo. Molec. Reprod. Devel. 38: 268-274.
C49	Westphal, H. 1989. Molecular genetics of development studied in the transgenic mouse. Annu. Rev. Cell Biol. 5: 181-196.
C50	Wilmot et al., Viable offspring derived from fetal and adult mammalian cells. Nature 385: 810-813.
C51	Wong et al., 1999. Generation of transgenic poultry by transfection of primordial germ cells. In: Transgenic Animals in Agriculture. CAB International. pp. 117-129.
C52	Yasuda et al., 1992. A method to obtain avian germ-line chimaeras using isolated primordial germ cells. J. Reprod. Fert. 96: 521-528

* a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, U.S.S.N. _____, filed _____, and relied upon for an earlier filing date under 35 U.S.C. §120 (continuation, continuation-in-part, and divisional applications).

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.

Include copy of this form with next communication to applicant.